IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the application of: Edward D. Ball *et al.*	Group Art Unit: Not yet assigned
Serial No.: N/A	Examiner: Not yet assigned
Filed: Herewith	
For: *BISPECIFIC MOLECULES FOR USE IN INDUCING ANTIBODY DEPENDENT EFFECTOR CELL-MEDIATED CYTOTOXICITY*	
Attorney Docket No.: MXI-026DVCN2	

"Express Mail" mailing label number: EL178767756US

Date of Deposit: December 12, 2000

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Viriato G. Cardoso

Please Print Name of Person Signing

BOX PATENT APPLICATION
Assistant Commissioner for Patents
Washington, D.C. 20231

PRELIMINARY AMENDMENT

Dear Sir:

Prior to examination of the above-identified application, please amend the application as follows:

In the Specification:

Amendment to the Title of the Invention

At page 1, please replace the title which reads: [Bispecific Molecules Having Clinical Utilities] with the following new title: --Bispecific Molecules For Use in Inducing Antibody Dependent Effector Cell-Mediated Cytotoxicity--.

Amendment to the Detailed Description

At page 5, line 6, please insert the following sentence after the phrase "ATCC Accession No. HB9469" --The hybridoma producing mAb 22 is available from the American Type Culture Collection, ATCC Accession No. HB12147.--

Amendment to the Abstract of the Invention

At page 16, please replace the title which reads: [Bispecific Molecules Having Clinical Utilities] with the following new title: --Bispecific Molecules For Use in Inducing Antibody Dependent Effector Cell-Mediated Cytotoxicity--.

At page 16, please delete the current abstract which reads:

[Bispecific molecules comprising a target cell specific ligand and an effector cell specific antibody or functional antibody fragment are disclosed.]

and add the following new abstract:

--Bispecific molecules comprising a non-immunoglobulin tumor cell specific ligand and an antibody which binds the Fc receptor of an effector cell at a site that is not inhibited by endogenous immunoglobulin are disclosed. The bispecific molecules can be used to induce a specific antibody dependent effector cell-mediated cytotoxicity against tumor cells, such as small cell lung carcinoma (SCLC) cells, either *in vivo* or *in vitro*.--

In the Claims:

Please cancel claim 1 without prejudice.

Please add new claims 25-37 as follows:

25. A bispecific molecule comprising an autocrine growth factor specific for a tumor cell and an antibody or antigen binding fragment thereof which binds the Fc receptor of an effector cell at a site that is not inhibited by endogenous immunoglobulin.

26. The bispecific molecule of claim 25, wherein the tumor cell is a human small-cell lung carcinoma cell.

27. The bispecific molecule of claim 26, wherein the autocrine growth factor binds to the gastrin-releasing peptide receptor of the human small-cell lung carcinoma cell.

28. The bispecific molecule of claim 27, wherein the autocrine growth factor is selected from the group consisting of bombesin and gastrin-releasing peptide and gastrin releasing peptide receptor binding analogues thereof.

29. The bispecific molecule of claim 25, wherein the Fc receptor is selected from the group consisting of FcγRI, FcγRII and FcγRIII.

30. A method of inhibiting proliferation of a tumor cell in a subject, comprising administering to the subject a bispecific molecule comprising (a) an autocrine growth factor specific for the tumor cell and (b) an antibody or an antigen binding fragment thereof which binds the Fc receptor of an effector cell at a site that is not inhibited by endogenous immunoglobulin.

31. The method of claim 30, wherein the tumor cell is a human small-cell lung carcinoma cell.

32. A method for stimulating an immune response against a tumor cell in a subject comprising administering to the subject a bispecific molecule comprising (a) an autocrine growth factor specific for the tumor cell and (b) an antibody or an antigen binding fragment thereof which binds the Fc receptor of an effector cell at a site that is not inhibited by endogenous immunoglobulin, wherein the bispecific molecule is administered in a pharmaceutically acceptable carrier.

33. The method of claim 32, wherein the autocrine growth factor is selected from the group consisting of: insulin-like growth factor I, transferrin, vasoactive intestinal peptide, neurotensin, neuromedin B, neurophysin, tumor necrosis factor, transforming growth factor alpha, platelet derived growth factor, the transferin receptor and analogues thereof.

34. The method of claim 32, wherein the autocrine growth factor is selected from the group consisting of bombesin and gastrin releasing peptide or an analogue thereof.

35. The method of claim 30, wherein the autocrine growth factor is selected from the group consisting of bombesin and gastrin releasing peptide or gastrin-releasing peptide receptor binding analogues thereof.

36. The method of claim 32, wherein the Fc receptor is selected from the group consisting of FcγRI, FcγRII and FcγRIII.

37. The method of claim 32, wherein the antibody is selected from the group consisting of: mAb22 produced by the hybridoma having ATCC Accession number HB12147 and mAb32 produced by the hybridoma having ATCC number HB9469.

REMARKS

Claims 2-24 were previously pending in the present application and have been cancelled herein. New claims 25-37 have been added. Accordingly, claims 25-37 are currently pending in the application. Support for the newly pending claims can be found in the claims as originally filed and throughout the application. No new matter has been added. For the Examiner's convenience, a copy of the claims that will be pending upon entry of the instant Amendment is attached hereto as Appendix A.

The title and abstract of the disclosure have been amended to more accurately reflect the nature of the invention being claimed. The specification has been amended to add reference to the ATCC deposit of monoclonal antibody, mAb22. A copy of the ATCC Receipts of Deposit for mAb22, as well as mAb32, were submitted in the parent application, Serial No. 08/451,194, along with an executed Declaration For Deposit providing the required assurances by the depositor that all restrictions on the availability of the deposited material will be irrevocably removed upon the granting of a patent.

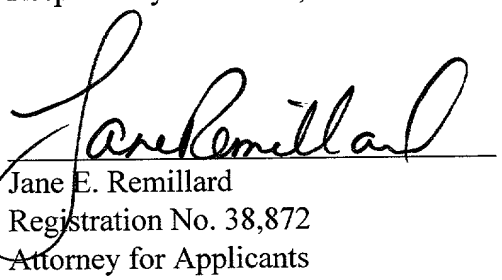
The foregoing claim cancellations were made solely to expedite the prosecution of the application. Applicants reserve the right to pursue the same or similar subject matter as encompassed by the amended and/or cancelled claims herein or as originally filed in this or a separate application.

CONCLUSION

The present application is now believed to be in condition for allowance.

If a telephone conversation with Applicants' Attorney would expedite prosecution of the above-identified application, the Examiner is urged to call Applicants' Attorney at the number listed below.

Respectfully submitted,



Jane E. Remillard
Registration No. 38,872
Attorney for Applicants

LAHIVE & COCKFIELD, LLP
28 State Street
Boston, MA 02109
Tel. (617) 227-7400

Dated: **December 12, 2000**

APPENDIX A

25. A bispecific molecule comprising an autocrine growth factor specific for a tumor cell and an antibody or antigen binding fragment thereof which binds the Fc receptor of an effector cell at a site that is not inhibited by endogenous immunoglobulin.

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27. The bispecific molecule of claim 26, wherein the autocrine growth factor binds to the gastrin-releasing peptide receptor of the human small-cell lung carcinoma cell.

28. The bispecific molecule of claim 27, wherein the autocrine growth factor is selected from the group consisting of bombesin and gastrin-releasing peptide and gastrin releasing peptide receptor binding analogues thereof.

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31. The method of claim 30, wherein the tumor cell is a human small-cell lung carcinoma cell.

32. A method for stimulating an immune response against a tumor cell in a subject comprising administering to the subject a bispecific molecule comprising (a) an autocrine growth factor specific for the tumor cell and (b) an antibody or an antigen binding fragment thereof which binds the Fc receptor of an effector cell at a site that is not inhibited by endogenous immunoglobulin, wherein the bispecific molecule is administered in a pharmaceutically acceptable carrier.

33. The method of claim 32, wherein the autocrine growth factor is selected from the group consisting of: insulin-like growth factor I, transferrin, vasoactive intestinal peptide, neurotensin, neuromedin B, neurophysin, tumor necrosis factor, transforming growth factor alpha, platelet derived growth factor, the transferin receptor and analogues thereof.

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36. The method of claim 32, wherein the Fc receptor is selected from the group consisting of FcγRI, FcγRII and FcγRIII.

37. The method of claim 32, wherein the antibody is selected from the group consisting of: mAb22 produced by the hybridoma having ATCC Accession number HB12147 and mAb32 produced by the hybridoma having ATCC number HB9469.